

CHAPTER 22 Statistics**EXERCISE 22a (p. 322)**

If a copy of the table is made then each item in the table can be crossed out once it has been “counted”. The answers give the frequencies in each group.

1. 7, 14, 17, 22, 12
2. 4, 22, 18, 17, 7, 2, 1, 1
3. 1, 2, 10, 15, 16, 20, 10, 6, 2

EXERCISE 22b (p. 323)

1.

	0	1	2	3	4
Frequency	7	15	4	3	1

2.

	S	V	C	P
Frequency	14	7	7	8

3.

	R	G	B	Y	P
Frequency	17	3	4	14	6

4.

	22	23	24	25	26	27
Frequency	1	10	15	11	4	3

EXERCISE 22c (p. 325)

1. a) 55 b) car 2. a) 52 3. a) plain salted 4. a) red

EXERCISE 22d (p. 326)

1. a) a cat b) 8 c) 28
 2. a) 8 b) 1 mark, 1 pupil c) 8 d) 28
 3. a) 6 b) Art c) French
 4. a) Castle Hill b) 10 000 c) Brotton, with 6500

EXERCISE 22e (p. 329)

1. a) 47 b)

	1–3	4–6	7–9	10–12
Frequency	16	25	3	3

2.

	1–3	4–6	7–9	10–12
Frequency	34	34	8	3

3. a) 19 b) 11 c) 16 d) not possible to say
 4. a) 153 b) 128 c) not possible to say
 6. a) 12 b) 3 c) number given includes those who read five books

EXERCISE 22f (p. 331)

1. a) seven car lengths b) one car length per 10mph
 c) weather, light, amount of traffic, type and straightness of road
 2. a) all electric b) all gas c) solid fuel d) gas
 3. a) Margate b) June c) December in Aberdeen, January in Margate

EXERCISE 22g (p. 334)

The answers are the angles for each slice.

1. $96^\circ, 132^\circ, 60^\circ, 42^\circ, 30^\circ$ 7. $96^\circ, 120^\circ, 36^\circ, 72^\circ, 36^\circ$
 2. $128^\circ, 152^\circ, 48^\circ, 24^\circ, 8^\circ$ 8. $108^\circ, 180^\circ, 40^\circ, 18^\circ, 14^\circ$
 3. $303^\circ, 3^\circ, 30^\circ, 24^\circ$ 9. $72^\circ, 13.5^\circ, 85.5^\circ, 94.5^\circ, 54^\circ, 40.5^\circ$
 4. $84^\circ, 204^\circ, 48^\circ, 24^\circ$ 10. $62^\circ, 82^\circ, 82^\circ, 21^\circ, 10^\circ, 103^\circ$
 5. $144^\circ, 48^\circ, 80^\circ, 88^\circ$ 11. $223^\circ, 40^\circ, 54^\circ, 36^\circ, 7^\circ$
 6. $140^\circ, 70^\circ, 70^\circ, 80^\circ$ 12. $35^\circ, 116^\circ, 128^\circ, 58^\circ, 23^\circ$

EXERCISE 22h (p. 337)

1. a) business and professional b) i) $\frac{1}{12}$ ii) $\frac{7}{36}$
 2. a) heating b) a little less
 3. a) i) $\frac{1}{8}$ ii) $\frac{1}{6}$ b) under 10 and 10–19

EXERCISE 22i (p. 338)

1. a) 10, 14, 10, 22 b) danger c) very effective (open to discussion)
 2. a) French b) 18, 15, 11, 12, 16: total 72
 c) this is not a good way to present the information because it is not clear how many pupils part of a body represents (open to discussion).
 3. a) consumption is rising each year
 b) impression is given by the volume of the bottle which goes up more quickly than the height of the bottle

EXERCISE 22j (p. 340)

1. 6 5. a) 5 b) 15 c) 33 d) 2.6 8. 7.2
 2. 25p 6. 12 9. 308.8p
 3. a) £40 b) £8 c) £8 7. 13.5p 10. 329
 4. 10

EXERCISE 22k (p. 342)

1. 40cm 3. a) 12p b) 0.4kg c) 10mm d) £3.25 5. a) 12 b) 10.3
 2. 27p 4. a) 44cm b) 147.3cm 6. a) 48p b) 25p